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Science

Software created to aid scientific inquiry

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COLUMBUS, Ohio, Oct. 11 (UPI) --
Software is being created at Ohio State University to help scientists operate big-budget research projects over the Internet inexpensively and efficiently.

"Communication delays can prevent remote operators from knowing exactly what is happening with an instrument at a particular moment and that can lead to making the wrong decisions as a result," said Prasad Calyam, a senior systems developer at the Ohio Supercomputer Center on the Ohio State campus. "When that happens, one wrong keystroke could spell disaster."

Calyam and his colleagues are developing software called RICE -- Remote Instrumentation Collaboration Environment -- to help researchers perform experiments more efficiently, regardless of network congestion.

Special algorithms control the software when a user's commands outweigh the "supply" -- bandwidth. For example, when Internet congestion causes a temporary freeze, RICE blocks commands from the user, preventing additional input.

"It's just human nature -- when we hit a button, and nothing happens, we hit the button again," Calyam said. "RICE notices when a user issues commands that are probably caused by network congestion and it blocks those commands.

The software was presented Thursday in Verona, Italy, during IMMERSCOM -- the first international conference on immersive telecommunications.